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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/800,121	03/12/2004	William L. Grouell	SUNMP355	9094
32291	7590	12/15/2005	EXAMINER	
MARTINE PENILLA & GENCARELLA, LLP			HARRIS, ANTON B	
710 LAKEWAY DRIVE			ART UNIT	
SUITE 200			PAPER NUMBER	
SUNNYVALE, CA 94085			2831	

DATE MAILED: 12/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

4A

Office Action Summary

Application No.

10/800,121

Applicant(s)

GROUELL ET AL

Examiner

Anton B. Harris

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>9/1/05; 10/18/04</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Babin (6,411,517) in view of Kurek, III (6,394,509).

Regarding claim 1, Babin (abstract) discloses a component mounting device, comprising:

a component collar 28;

a component mounting frame 24 configured to receive the component collar 28 and enables movement of the component 54 in at least two directions to actively enable the component 54, but lacks a clocked gear assembly coupled to the component mounting frame.

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Kurek, III (abstract) teaches a clocked gear assembly 42 coupled to the component mounting frame 32.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Babin by providing a clocked gear assembly coupled to the component mounting frame in order to move the disk drive in view of the teachings of Kurek, III.

Regarding claim 2, Babin (abstract) discloses the invention substantially as claimed including a lever 40 that enables movement in the vertical and horizontal directions, but lacks a vertical rack gear on the component collar; a horizontal rack gear on the component collar; a vertical clocked gear 14, 16 in the clocked gear assembly; a horizontal clocked gear (near 44) in the clocked gear assembly; and a lever, wherein the vertical rack gear meshes with the vertical clocked gear.

Kurek, III (abstract) teaches a vertical rack gear 42 on the component collar; a horizontal rack gear 42 on the component collar (near 14, 16), a vertical clocked gear 14, 16 in the clocked gear assembly 44; a horizontal clocked gear (near 44) in the clocked gear assembly; and a lever 40, wherein the vertical rack gear 42 meshes with the vertical clocked gear 14, 16.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Babin by providing a clocked gear assembly coupled to the component mounting frame in order to move the disk drive in view of the teachings of Kurek, III.

Furthermore, the limitations of “for controlling the vertical clocked gear and the horizontal clocked gear (near 44)” in claim 1 has been considered, but does not result in a

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structural difference. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

Regarding claim 3, the teachings of Kurek, III further include a movement in the first direction and in the second direction is accomplished by movement of the lever 40 along an arc (see figure 3).

Regarding claim 4, the teachings of Kurek, III further include that the lever 40 includes a first pin 22 to engage the vertical clocked gear 14, 16, the vertical clocked gear 14, 16 having a first slot for receiving the first pin 22, and the lever includes a second pin to engage the horizontal clocked gear horizontal clocked gear (near 44), the horizontal clocked gear (near 44) having a second slot for receiving the second pin 41.

Regarding claim 5, the teachings of Kurek, III further include that movement of the lever 40 through a first segment of the arc causes the first pin 22 to engage the first slot to move the vertical clocked gear 14, 16 and movement of the lever 40 through a second segment of the arc causes the second pin 41 to engage the second slot to move the horizontal clocked gear (near 44).

Regarding claim 6, the teachings of Kurek, III further include that the first pin 22 disengages from the first slot and the second pin 41 engages the second slot at a cross-over point.

Regarding claim 7, the teachings of Kurek, III further include that the arc (see figure 3) is defined by approximately 90 degrees, the first segment being defined by approximately 45 degrees and the second segment being defined by approximately 45 degrees.

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Regarding claim 8, the teachings of Kurek, III further include that movement of the component 12 in a first direction is configured to enable insertion of the component device into an array of component devices and movement of the component 12 in a second direction is configured to enable connection of the component to a board connector.

Regarding claim 9, Babin (abstract) discloses a component mounting device comprising: a component collar 28 for holding a component, a component mounting frame 24 configured to receive the component collar, the assembly configured to enable movement of the component collar 28 in a first direction upon initial engagement with the component mounting frame 24 and movement of the component collar 28 in a second direction upon release, but lacks a clocked gear assembly coupled to the component mounting frame.

Kurek, III (abstract) teaches a clocked gear assembly 42 coupled to the component mounting frame 32.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Babin by providing a clocked gear assembly coupled to the component mounting frame in order to move the disk drive in view of the teachings of Kurek, III.

Regarding claim 10, the teachings of Kurek, III further include that the clocked gear assembly 42 is further configured to enable movement of the component collar 12 in the first direction upon release of the clocked gear assembly 42 by the second rack gear of the component mounting frame 32, and engagement of the first rack gear to the clocked gear assembly 42.

Regarding claim 11, the teachings of Kurek, III further include that the component mounting frame 32 comprises a track 43 for engaging the component collar 12, the track guiding

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43 the component collar 12 during movement of the component collar 12 in the first direction and guiding the component collar 12 during movement of the component collar 12 in the second direction.

Regarding claim 12, the teachings of Kurek, III further include that movement of the component collar 12 in the second direction is configured to enable connection of the component 12 to a board connector.

Regarding claim 13, the teachings of Kurek, III further include that movement of the component collar 12 in the first direction is configured to enable insertion of the component 12 into an array of components and is further configured to enable extraction of the component from an array of components 12.

Regarding claim 14, Babin (abstract) discloses a computer component mounting device comprising:

a computer component 54 disposed in a component collar 28,
a component mounting frame 24 configured to receive the component collar 28 and enables movement of the computer component 54 in each of a first direction and a second direction, wherein the computer component mounting device provides for positioning the computer component in the first direction and for positioning the computer component in the second direction, but lacks a clocked gear assembly.

Kurek, III (abstract) teaches a clocked gear assembly 42.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Babin by providing a clocked gear assembly in order to move the disk drive in view of the teachings of Kurek, III.

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Regarding claim 15, the teachings of Kurek, III further include that the clocked gear assembly 42 includes:

a vertical clocked gear 14, 16;

a horizontal clocked gear (near 44) ; and a lever 40 for controlling the vertical clocked gear 14, 16 and the horizontal clocked gear (near 44), wherein the vertical clocked gear 14, 16 and the horizontal clocked gear (near 44) are independently actuated by movement of the lever 40, the lever 40 having a first pin 22 configured to engage a first slot 43 on the vertical clocked gear 14, 16 and the lever 40 further having a second pin 41 configured to engage a second slot on the horizontal clocked gear (near 44).

Regarding claim 16, the teachings of Kurek, III further include that positioning the computer component 54 in the first direction and in the second direction is accomplished by movement of the lever 40 in through a single arc.

Regarding claim 17, the teachings of Kurek, III further include that the movement of the lever 40 through a first arc segment causes the first pin 22 to engage the first slot 43 to move the vertical clocked gear 14, 16, and movement of the lever 40 through a second arc segment causes the second pin 41 to engage the second slot to move the horizontal clocked gear (near 44) .

Regarding claim 18, Babin (abstract) discloses a computer device carrier system, comprising:

a carrier blade capable of receiving a plurality of computer devices 54 and further configured to arrange the plurality of computer devices 54 in at least one array of computer devices 54;

a computer device frame 24 attached to the carrier blade, the computer device frame providing positioning and support for a computer device 54, and a computer device collar 28 coupled to the

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computer device, the computer device collar 28 configured to be received by the computer device frame 24 to position and support the computer device, but lacks a clocked gear assembly.

Kurek, III (abstract) teaches a clocked gear assembly 42.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Babin by providing a clocked gear assembly in order to move the disk drive in view of the teachings of Kurek, III.

Regarding claim 19, the teachings of Kurek, III further include that the clocked gear assembly 42 includes: a vertical clocked gear 14, 16; a horizontal clocked gear (near 44) ; and a lever 40 for controlling the vertical clocked gear 14, 16 and the horizontal clocked gear (near 44), wherein the vertical clocked gear 14, 16 and the horizontal clocked gear (near 44) are independently actuated by movement of the lever 40, the lever 40 having a first pin 22 configured to engage a first slot 43 on the vertical clocked gear 14, 16, and a second pin 41 configured to engage a second slot on the horizontal clocked gear (near 44), and movement of the lever 40 through a first arc causes the first pin 22 to engage the first slot 43 to move the vertical clocked gear 14, 16 and movement of the lever 40 through a second arc causes the second pin 41 to engage the second slot to move the horizontal clocked gear (near 44), and a cross-over point being defined when the first pin 22 disengages from the first slot 43 and the second pin 41 engages the second slot.

Regarding claim 20, Babin (abstract) discloses a storage array carrier system, comprising: a carrier blade capable of receiving a plurality of storage devices 54 and arranging the plurality of storage devices 54 in a plurality of linear arrays; a storage device frame 24 attached to the carrier blade to position and to secure a storage device, the storage device frame 24 and enables

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movement of the storage device 54 in at least two directions; and a device collar 28 coupled to the storage device 54, the device collar 28 capable of being received in a track 26 of the storage device frame 24, the device collar 28 configured to mesh with the clocked gear assembly (near 44) to position the storage device 54 and to connect the storage device 54 to, and disconnect the storage device 54 from, a power and data connection, but lacks a clocked gear assembly.

Kurek, III (abstract) teaches a clocked gear assembly 42.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Babin by providing a clocked gear assembly in order to move the disk drive in view of the teachings of Kurek, III.

Regarding claim 21, the teachings of Kurek, III further include that the clocked gear assembly (near 44) includes:

a vertical clocked gear 14, 16; a horizontal clocked gear (near 44); and a lever 40 for controlling the vertical clocked gear 14, 16 and the horizontal clocked gear (near 44), wherein the vertical clocked gear 14, 16 and the horizontal clocked gear (near 44) are independently actuated by movement of the lever 40 to mesh with each of a vertical rack gear 44 of the device collar and a horizontal rack gear of the device collar 28 for inserting the storage device 54 into and removing the storage device from a location in one of the plurality of linear arrays of storage devices 54 without one of connecting and disconnecting another storage device.

Regarding claim 22, Babin (abstract) discloses a 22 an apparatus comprising: a collar 28, but lacks a first gear positioned on the collar; and a second gear positioned on the collar and proximate to the first gear, wherein the first and the second gears are configured for engaging corresponding portions of a receiving mechanism.

Kurek, III (abstract) teaches a first gear 42 positioned on the collar; and a second gear (see figure 3) positioned on the collar and proximate to the first gear 42, wherein the first 42 and the second gears (see figure 3) are configured for engaging corresponding portions of a receiving mechanism.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Babin by providing a first gear positioned on the collar; and a second gear positioned on the collar and proximate to the first gear, wherein the first and the second gears are configured for engaging corresponding portions of a receiving mechanism in order to move the disk drive in view of the teachings of Kurek, III.

Regarding claim 23, the teachings of Kurek, III further include that the first gear 42 comprises a first plurality of linearly arranged gear teeth 26; and the second gear (see figure 3) comprises a second plurality of linearly arranged gear teeth 26.

Regarding claim 24, the teachings of Kurek, III further include that the first plurality of linearly arranged gear teeth 26 is substantially perpendicular to the second plurality of linearly arranged gear teeth 26.

Regarding claim 25, the teachings of Kurek, III further include that the first plurality of linearly arranged gear teeth 26 is not co-planer with the second plurality of linearly arranged gear teeth 26.

Regarding claim 26, the teachings of Kurek, III further include that the first gear 42 defines a first plane and the second gear (see figure 3) defines a second plane, different from the first plane, and offset in a first direction perpendicular to the first and second planes.

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Regarding claim 27, the teachings of Kurek, III further include that a number of gear teeth 26 on the first gear 42 is equal to a number of gear teeth 26 on the second gear (see figure 3).

Regarding claim 28, the teachings of Kurek, III further include a means for coupling the collar 12 to a component.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Collins, III U.S. Patent No. 5,631,808 discloses a latch that retains electronic devices including a lever, a pin, and a method of positioning the device.

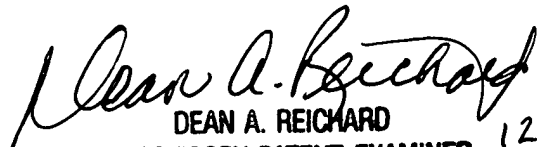
Mazura et al. U.S. Patent No. 5,675,475 discloses a device that provides insertion and removal of electronic components including a lever, a pin, and a method of positioning the device.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anton B Harris whose telephone number is (571) 272-1976. The examiner can normally be reached on weekdays from 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Dean Reichard, can be reached on (571) 272-2800 ext 31. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

abh

12/12/05


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12/12/05